More importantly providing a means to inflate head and neck protection airbags and other anatomical micro airbags mounted in the vicinity of the human body. This particular embodiment has a crushable center console as well.

Figure 5 and 6 is an illustration of the seating arrangement as used for loading and unloading passengers and driver. Figure 5 represents the open position and Figure 6 represents the closed position.

Figures 5A and 6A illustrate an embodiment of the current invention with the protector shield/shock absorbers/external airbag hinging down to support the primary slide. A useful feature for larger vehicles with more than a single seat on each side.

Figures 7-9 is an illustration of the Gravity slide drive that may be embodied in the invention. Figure 7 is an illustration of the Gravity Slide drive at the end of the unload cycle for passengers. Figure 8 is an illustration of the Gravity slide drive at the beginning of the Load cycle for passengers. Figure 9 is an illustration of the left side loaded and ready for operation of the vehicle and the right side at the start of the loading operation, emphasizing the independence of the two sides of the Gravity slide drive mechanism.

Figure 10 A and B are an illustration of Isometric views of the present invention on one side of the vehicle for clarity. Figure 10 C is an illustration of a Plan view of the present invention for one side of the vehicle.

Figures 10 A1, 10B1 are isometric views of an alternative embodiment with a vertical extension/"safety cage" to protect passengers further. Figure 10 C1 is a plan view of the same arrangement. **Figure 10A2 illustrates the lateral support element, reinforced seat side, multi-element adjustable supports, reinforcing for safety beam elements, anchor bracing, and passenger protection detectors.**

Figures 10 E 1-E4 show an embodiment of the invention with the passenger support mechanism being a child or infant support mechanism (CISM) . Fig 10 E1 shows the normal operating posituion, Fig 10 E 4 shows the extended shock absorbers in a front impact.. The CISM will also rotate about the pivot support against damped rotational springs to orient the CISM with the head of the occupant lower to engage a safety harness, and the back of the occupant moved forward and upwards. Fig 10 E2 shows the arrangement in the access position with the lock on the Inside Airbag Equivalents (not shown) removed, and the CISM support at the end of the sliding arrangement for easy access for loading and securing the CISM. Fig 10 E3 shows the movement of the support elements for the CISM as it encounters a side impact on the left hand side. (a mirror image would suffice to represent the impact on the right hand side) with the inertial mass of the CISM in place. Fig 10 E5 shows a cross section of the Sagety beam lower element and the safety beam upper element which is integrated with the secondary slide as there is no impact decoupler, with the locking pin that locks the shock absorbing internal airbag equivalents to the safety beam lower elements in the operating position.

Figure 10 E 6 ~~18~~ – 10E21 Illustrate several embodiments of a chld seat or Child/Infant support mechanism

Figure 11. is an illustration of the position of the "Safety Zones" that are targeted for protection with the Protector shields.

Figure 12. A is an illustration of an isometric view of the Seat arrangement. Figures 12B and 12C is an illustration of the Plan and Side Elevation of the seat arrangement. Figure 12 A1 illustrates an alternative embodiment of the seat arrangement. Figures 12B1 and 12C1 illustrate the plan and elevation of this embodiment. Figure 12 D1 illustrates an embodiment of the child seat. Figure 12 E1 illustrates an embodiment with a different external profile for the seat providing greater protection to the passenger. Figures 12 F2 and 12 G2 illustrate isometric views of an embodiment of the safety harness and 12 H2, 12 I 2, 12 J 2 illustrate an isometric view of another embodiment of the safety harness, in the normal state, with front impact anatomical passive micro air bag deployed, and the head and neck anatomical micro airbags deployed respectively. **Figure 12K2 illustrates a harness with a net and frame construction.** Figure 13. is an illustration of a drawing of isometric view of the present invention.

Figure 14 illustrates a horizontal cross section of an embodiment of the present invention at the level of the upper primary slides.

Figure 15A illustrates a side impact with internal and external airbags deployed and the passengers ejected away from the impact.

Figure 15B illustrates the deployment of the anatomical passive micro airbags in a front impact and the passenger impact protection with the harness and shield. The left side passenger illustrates the normal position for reference.

Figure 15 C illustrates a detailed view of the safety harness and its components.

Figure 16A illustrates a passenger ready to leave the vehicle. The safety harness/shield is still in place.

Figure 16B shows the passenger in Figure 16 A after releasing the safety harness/shield from the locks.

~~Figure 16C shows the same passenger in 16 A,B but with the safety harness/shield now well above the head so that the passengers leave the vehicle by simply standing up.~~

Figure 16D shows the safety harness/shield unlocked from its mounts within the vehicle, illustrating the flexibility to move within the vehicle under these conditions but not having the visibility to drive, thereby ensuring that the safety harness/shield is used under driving conditions.

Figure 16 E illustrates a retractable canopy which may be used when the seat is drawn out.

Figures 17 A,B show a schematic diagramof the passive air cushionsystem disclosed in this invention.

Figures 18 A-J shows different views of the wheel chair arrangements deployed as passenger support mechanisms.

Figures 19 A-E show an embodiment of the customizable contoured multi – element seat. Figure 19 F, G show another embodiment of a customizable multi element [illegible]

Figures 20 A-C show an embodiment of the indo skeletal structure that includes special arrangements for front impact protection and other features for passenger convenience and comfort and Fig 20D shows an embodiment of the connections between the elements in Figures 20 A-C.

~~Figures 21 A-F E show other alternative embodiments for front impact protection.~~

LIST OF REFERENCE NUMBERS

101 - Central Member of Indo-skeletal structure
102 – Safety Beam Lower Element
103 - Side impact shock absorbers
104 – External Air Bags
105 – Perforation Shields
106 – Protector Shields
107 – Safety Beam Upper Element
108 – Auxiliary Beam.(fixed or sliding)
109 – Multi-element contoured passenger seat
110 – Vehicle Shell/Body
111 – Secondary Slides/Impact decouplers
112 – Locking devices
112A-Pivot for Protector shield
113 – Proactive Velocity/Distance Detectors
114 – Internal side impact airbag
115 – Spring device for manual slide
116 – Inside door open button
117 – outside door open button
118 – Beam pivot for Gravity slide drive ejector
119 - Safety Harness
120 – Support for Safety Harness
121 – Bottom of seating surface of the contoured seat
122 – Contoured arm rests
123 – Child seat attachment
124 – Impacting body
125 - Vertical extensions/ Safety Cage (fixed or sliding)
126 – Center console

234 Pivot for Internal Airbag equivalent attached to CISM support bracket
235 – Fixed Support for safety beam lower elements and internal airbag equivalents
236 – support for secondary slides, CISM support bracket and internal airbag equivalents
237 – Support flange between Secondary slide and internal airbag equivalent active ends
238 - Internal airbag equivalents – dual movable active end at center
239 -Internal Airbag Equivalents–dual movable extremes-expansion/compression..
240 – Lock pin hole on dual internal airbag equivalent center support
241 – Top lock flanges
242 – Side lock flanges
243 - Front lock flanges
244 - Side support flange
245 – Lateral Brace
P101 – Compressible Laterally Slidable (when detached) Hip Bolster
P102 – Seat Bottom Contoured
P103 – Impact Decoupler Secondary Slide Elements
P104 – Retraction Slots for secondary slide support rails (rails not shown)
P105 – Retraction slots for Secondary slides, retracted at Egress and Ingress
P106 – Front sid of rear seat
P107 – Back of seat bottom
P108 – Side bolsters in retracted position for egress and ingress
P109 – Crushed side bolstersduring impact (does not intrude into hip space)
P110 – Side Bolster Air Bags
P111 – Shoulder bolster /support – operating position and width
P112 – Back rest
P113 – Head Rest
P114 – Head and Neck air bags (head rest is fixed to backrest so that it moves with back rest on lateral impact)
P115 – Body Air Bags to hold and move the body on lateral impact. The airbags are shaped to push the arms out of the way at deployment time.
P116 – Crushed shoulder bolster/support (controlled crush)
P117 – Back Rest
501- Safety zone
502 - lateral support element
503 – reinforced seat side
504 - left support adjustable multi-element
505 - right support adjustable multi-element
506 - back support adjustable multi-element
507 - bottom support adjustable multi-element
510 – Reinforcing – Safety beam upper element
511 – Reinforcing – Safety Beam Lower Element
512 – Anchor Bracing Bracket
513 – Passenger Protection Detectors
514 – Net Strature for Harness
515 – Frame for Net Structure for Harness
516 – Retractable canopy